

Figure 3. PLM image of tremolite/actinolite in sample 6423Q1464 (Debris 03).

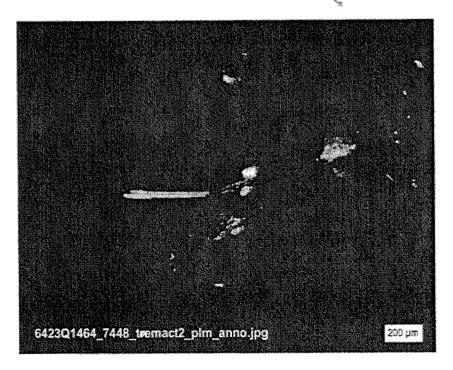


Figure 4. PLM image of tremolite/actinolite in sample 6423Q1464 (Debris 03).

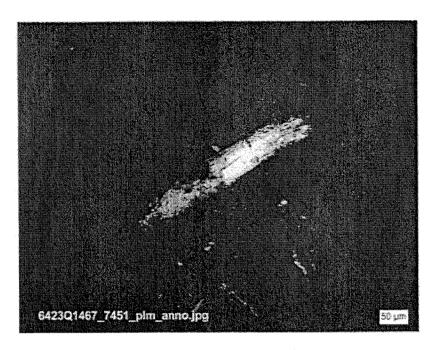


Figure 5. PLM image showing a chrysotile bundle with binders and fillers in sample 6423Q1467 (Debris 103).

PROJECT NAME: ARIZONA BUILDINGS

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Compass Environmental, Inc. 1751 McCollum Parkway Kennesaw, CA 30144 Phone (770) 499-7127 Fix (770) 423-7402

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APPENDIX D

MVA, INC. LABORATORY REPORT TUSCON MUSIC ATTIC DUST CHARACTERIZATION

Arizona Building Dust – Civic Center Attic Environmental Forensic Microscopy Analysis

Prepared for:

Compass Environmental Inc. 1751 McCollum Parkway Kennesaw, GA 30144

Respectfully Submitted by:

James R. Millette, Ph.D. Executive Director

MVA Scientific Consultants 3300 Breckinridge Boulevard Suite 400 Duluth, GA 30096

29 November 2006



Arizona Building Dust – Civic Center Attic Environmental Forensic Microscopy Analysis

INTRODUCTION

This report contains the results of analytical work performed on dust from microvac samples received at MVA Scientific Consultants' laboratory on 23 August 2005 via Federal Express. As shown in Table 1 below, the samples that are the subject of this report were the residual dusts retained on the microvac sampler nozzles collected from the attic of the Tucson Civic Center Music Hall after the rest of the sample was prepared following the ASTM D5755 method. It was requested that MVA Scientific Consultants perform an environmental forensic microscopy examination of dust retained on the microvac sampler nozzles. The analyses were done on 28 November 2006.

Table 1. Sample Information

Compass Sample #	MVA ID#	Description
Dust 45	Q1453	Tucson Civic, Attic, NE area, top of metal air duct
Dust 46	Q1454	Tucson Civic, Attic, SE area, top of metal air duct
Dust 47	Q1455	Tucson Civic, Attic, north central, top of metal air duct
Dust 48	Q1456	Tucson Civic, Attic, NW area, top of metal air duct
Dust 49	Q1457	Tucson, Civic, Attic, SW area, top of metal air duct
Dust 50	Q1458	Blank

ANALYTICAL METHODS

The samples were first examined by stereomicroscopy using a magnification range from 6.5X to 40X. Analysis was then performed by polarized light microscopy including microchemical tests utilizing an Olympus BH-2 polarized light microscope having a magnification range from 40X to 1000X.

RESULTS AND DISCUSSION

The dusts in Samples Q1453 through Q1457 have the same appearance. They are all fine brown dusts (all particles less than 1 mm in diameter). They contain primarily vermiculite, gypsum and chrysotile asbestos (Figures 1 and 2). The majority of the particles in the dusts in Samples Q1453 through Q1457 are consistent with fallout from the fireproofing (containing vermiculite, gypsum and chrysotile) that is located above the metal air ducts.

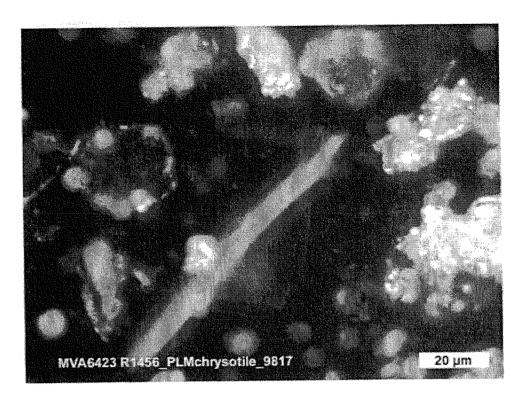


Figure 1. Polarized light microscope image (darkfield mode) of a chrysotile bundle among gypsum and vermiculite flakes in Sample R1456.

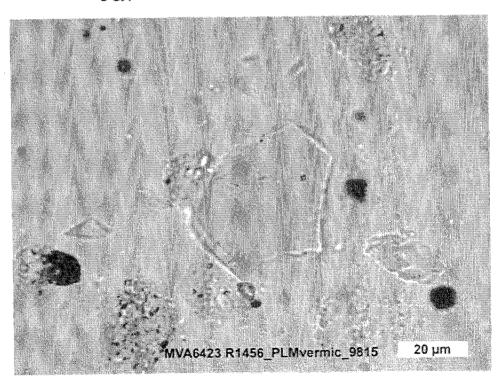


Figure 2. Polarized light microscope image (brightfield mode) of a vermiculite flake in Sample R1456. Aggregates of gypsum are also evident.

MVAreport112906.doc Page 3 of 3



January 11, 2007

Mr. Martin Dies Dies & Hile, LLP 1601 Rio Grande, Suite 330 Austin, TX 78701

RE: Arizona Buildings Inspection Report Addendum

Dear Mr. Dies:

Please permit this letter and the attached laboratory reports serve as an addendum to my Arizona Buildings Inspection Report previously submitted. It is my opinion these reports support the conclusion the asbestos found in the dust samples collected in each of the buildings more likely than not came from the in-place asbestos-containing fireproofing or the acoustical plaster at issue in each building.

Sincerely,

William M. Ewing, CIH

Technical Director

Enclosure

Arizona Building Dust
East and West Court Buildings
Environmental Forensic Microscopy Analysis

Prepared for:

Compass Environmental Inc. 1751 McCollum Parkway Kennesaw, GA 30144

Respectfully Submitted by:

James R. Millette, Ph.D. Executive Director

MVA Scientific Consultants 3300 Breckinridge Boulevard Suite 400 Duluth, GA 30096

10 January 2007



Arizona Building Dust – East and West Court Buildings Environmental Forensic Microscopy Analysis

INTRODUCTION

This report contains the results of analytical work performed on dust from microvac samples received at MVA Scientific Consultants' laboratory on 23 August 2005 via Federal Express. As shown in Table 1 below, the samples that are the subject of this report were the residual dusts retained on the microvac sampler nozzles collected from horizontal surfaces of the East Court and West Court Buildings after the rest of the sample was prepared following the ASTM D5755 method. It was requested that MVA Scientific Consultants perform an environmental forensic microscopy examination of dust retained on the microvac sampler nozzles. The analyses were done during the period of 13 December 2006 through 10 January 2007.

Table 1. Sample Information

Compass	40000 2000 COMMON COMMO	
Sample #	MVA ID#	Description
Dust 17	Q1434	Blank
Dust 24	Q1439	East Court Bidg., 6th Floor elevator lobby, top of light fixture
Dust 25	Q1440	East Court Bidg., 5th floor, elevator lobby, outside ladies room
Dust 29	Q1444	West Court Bidg., 3rd floor, open work area, top of light fixture
Dust 30	Q1445	West Court Bldg., 2nd floor, pretrial services reception

ANALYTICAL METHODS

The samples were first examined by stereomicroscopy using a magnification range from 6.5X to 40X. Analysis was then performed by polarized light microscopy including microchemical tests utilizing an Olympus BH-2 polarized light microscope having a magnification range from 40X to 1000X.

RESULTS AND DISCUSSION

The dusts in Samples Q1439, Q1440 and Q1444 have the same general appearance. They are all fine brown granular dusts. Sample Q1445 is a bit more gray in color but similar in composition. They contain vermiculite, gypsum and chrysotile asbestos (Figures 1 through 3). The particles in the dusts are consistent with normal indoor building dusts^{1,2} (including cotton and other fibers) mixed with fallout from the fireproofing (containing vermiculite, gypsum and chrysotile) that is located in the building.

REFERENCES

- 1. Millette, J.R., Lioy, P.J., Wietfeldt, J., Hopen, T.J., Gipp, M., Padden, T., Singsank, C., and Lepow, J., "A Microscopical Study of the General Composition of Household Dirt", Microscope, 51(4): 201-207, 2003.
- 2. Hopen, T. J. and Millette, J. R., "Microscopical Characterization of IAQ Dust Particles", in Proceedings of Engineering Solutions to Indoor Air Quality Problems, VIP.51, Air & Waste Management Association, pp. 437-444, 1995.

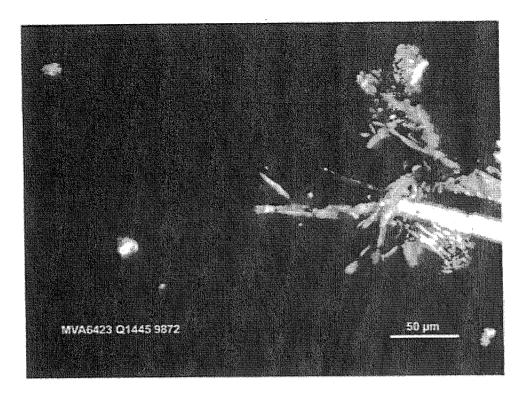


Figure 1. Polarized light microscope image (brightfield mode) of a chrysotile bundle among gypsum and vermiculite flakes in Sample Q1445.

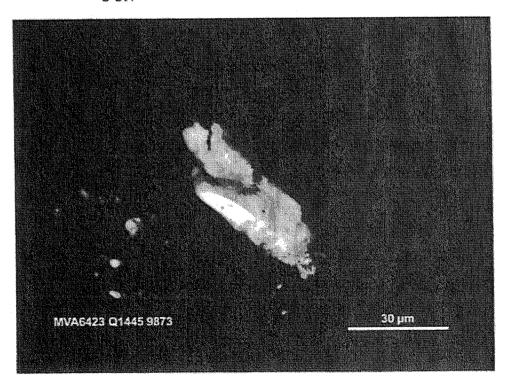


Figure 2. Polarized light microscope image (darkfield mode) of a vermiculite flake in Sample Q1445.

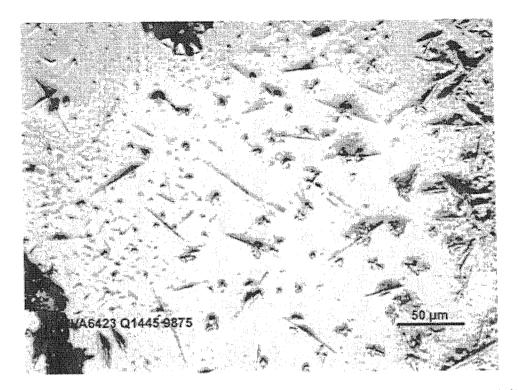


Figure 3. Polarized light microscope image (brightfield mode) of gypsum crystals in Sample Q1445.